

AD-A264 108



UNITED STATES ARMY

HEALTH CARE STUDIES AND  
CLINICAL INVESTIGATION ACTIVITY



DTIC  
ELECTE  
MAY 12 1993  
S B D

PATIENT SATISFACTION SURVEY  
1990-1991

A. David Mangelsdorff, Ph.D., M.P.H.

U.S. Army Health Care Studies and Clinical Investigation Activity  
U.S. Army Health Services Command  
Fort Sam Houston, Texas 78234-6060

Health Care Studies and Clinical Investigation Activity  
Consultation Report CR91-010

September 1991

DISTRIBUTION STATEMENT A

Approved for public release  
Distribution Unlimited

93 5 11 187

UNITED STATES ARMY

HEALTH SERVICES COMMAND

FORT SAM HOUSTON, TEXAS 78234



93-10520



NOTICE

The findings in this report are  
not to be construed as an official  
Department of the Army position  
unless so designated by other  
authorized documents.

\* \* \* \* \*

Regular users of services of the Defense Technical Information Center  
(per DOD Instruction 5200.21) may purchase copies directly from the  
following:

Defense Technical Information Center (DTIC)  
ATTN: DTIC-DDR  
Cameron Station  
Alexandria, VA 22304-6145

Telephones: DSN 284-7633, 4 or 5  
COMMERCIAL (703) 274-7633, 4, or 5

All other requests for these reports will be directed to the following:

U.S. Department of Commerce  
National Technical Information Services (NTIS)  
5285 Port Royal Road  
Springfield, VA 22161

Telephone: COMMERCIAL (703) 487-4650

## REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION Unclassified			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited		
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S)			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
6a. NAME OF PERFORMING ORGANIZATION US Army Health Care Studies & Clinical Investigation activity HSHN-T		6b. OFFICE SYMBOL (If applicable)		7a. NAME OF MONITORING ORGANIZATION	
6c. ADDRESS (City, State, and ZIP Code) Ft Sam Houston, TX 78234-6060		7b. ADDRESS (City, State, and ZIP Code)			
8a. NAME OF FUNDING/SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8c. ADDRESS (City, State, and ZIP Code)		10. SOURCE OF FUNDING NUMBERS			
		PROGRAM ELEMENT NO	PROJECT NO.	TASK NO	WORK UNIT ACCESSION NO
11. TITLE (Include Security Classification) (U) Patient Satisfaction Survey					
12. PERSONAL AUTHOR(S) A. David Mangelsdorff					
13a. TYPE OF REPORT Final		13b. TIME COVERED FROM Aug 90 TO Sep 91		14. DATE OF REPORT (Year, Month, Day) 1991 September	
15. PAGE COUNT 30					
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	Patient Satisfaction, patient care, medical care beneficiary		
19. ABSTRACT (Continue on reverse if necessary and identify by block number) Headquarters, U.S. Army Health Services Command (HQ HSC) requested the Group Health Association of America (GHAA) Consumer Satisfaction Survey instrument be used to survey potential users of DoD medical treatment facilities (HSC Task Number 2293). A similar survey was administered in 1989 and it was recommended that patient satisfaction surveys be conducted each year. The GHAA instrument was adapted for a military population and sent out from November 1990 through April 1991. Returned instruments were edited and comments coded. Items were scored as suggested by GHAA and were developed using the GHAA criteria. The 10 GHAA content categories were access, finances, technical quality, communication, choice & continuity of providers, interpersonal care, outcomes, overall quality, time spent, and general satisfaction.					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION Unclassified		
22a. NAME OF RESPONSIBLE INDIVIDUAL A. David Mangelsdorff, Ph.D., M.P.H.			22b. TELEPHONE (Include Area Code) (210) 221-0671		22c. OFFICE SYMBOL HSHN-T

## TABLE OF CONTENTS

DISCLAIMER	i
REPORT DOCUMENTATION PAGE (DD 1473)	ii
TABLE OF CONTENTS	iii
ACKNOWLEDGMENTS	iv
BACKGROUND	1
METHOD	
Subjects	1
Procedure	1
Overview	2
RESULTS	
Demographics	2
Category of Beneficiary Users	2
Branch of Service	2
Gender	3
Rank	3
Psychometrics	4
Comparative Analyses	4
Scoring of Content Categories	4
Overview	4
Category of Beneficiary Users	4
Type of Nearest DoD Facility	5
Type of Health Care Program Used	5
Who Uses the DoD Health System?	5
Level of Satisfaction: Ratings	5
Comments	5
Level of Satisfaction: Comments	6
DISCUSSION	
Areas Needing Change	7
What Do These Findings Mean?	7
Comparisons With Previous Studies	7
CONCLUSIONS	8
RECOMMENDATIONS	8
TABLES	
1 Descriptive Statistics: Mean and Median Responses For Items In Content Categories	9
2 Means and One-way ANOVA Comparisons For GHAA Content Categories	11
3 Four-way ANOVA Comparisons on GHAA Content Categories	13
4 Patient Satisfaction Comments	14
REFERENCES	15
APPENDIX A Patient Satisfaction Survey	16
APPENDIX B Psychometrics	25
Factor Analysis	25
Reliability Estimates: Coefficient Alphas of GHAA Content Categories	25
Reliability Estimates: Coefficient Alphas of Item Clusters From Factor Analysis	25
Reliability Estimates: Inter-Item Correlations	26
DISTRIBUTION LIST	27

# ACKNOWLEDGMENTS

This report was made possible by the dedicated efforts of James W. George, Janice L. Ware, Pat Twist, and Herbert Jacobs. Consultation from COL David A. McFarling and Dr. Morris Peterson is appreciated. The data tapes from the DEERS data base were created by Richard K. Orphin, Jr. The Group Health Association of America was helpful in providing the modified GHAA Consumer Satisfaction Survey items.

<b>Accession For</b>	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	
A-1	

## PATIENT SATISFACTION SURVEY

### Background

The patient satisfaction survey tasking came from Headquarters, Health Services Command requesting the GHAA Consumer Satisfaction Survey instrument be used to survey potential users of DoD medical treatment facilities (HSC Task Number 2293).

The Patient Satisfaction Survey project was begun in June 1989 with the request to the Group Health Association of America (GHAA) for permission to modify the GHAA Consumer Satisfaction Survey items for use with a military population. With GHAA's permission, the survey items were staffed with the U.S. Army Soldier Support Center National Capitol Region in accordance with AR 600-46. A survey control number was assigned by Soldier Support Center NCR (ATNC-AO-89-26, RCS:MILPC-3). The 1989-1990 study resulted in a report (Mangelsdorff, 1990). It was recommended that patient satisfaction surveys be conducted each year with the results provided to Headquarters, Health Services Command. In 1990, GHAA modified the Consumer Satisfaction Survey instrument. The present report documents the 1990-1991 effort.

### METHOD

#### Subjects

Patient Satisfaction Surveys were mailed to 9,200 eligible beneficiaries at 38 Army medical treatment facilities (MTFs). For each of the medical centers, 400 individuals were selected; for the other medical activities, 200 individuals were chosen. Subjects were randomly selected from Defense Eligibility Enrollment Reporting System (DEERS) data lists using zipcodes in the MTF catchment areas. The distribution of subjects from Army, Navy/Marine, and Air Force populations reflected the distribution in the DEERS data lists.

#### Procedure

A survey control number was assigned by Soldier Support Center NCR (ATNC-AO-91-24, RCS:MILPC-3). Control numbers were used to identify the MTF and the category of beneficiary (active duty, active duty dependent, retired, or retired/deceased dependent); this became the "anticipated" category of beneficiary. Subjects reported their own category of beneficiary; this became the "self reported" category of beneficiary. The lists of eligible beneficiaries were determined from the DEERS patient populations at the selected Army MTFs. Mailing labels were developed from the DEERS lists broken down by zipcode areas around the Army MTFs. Problems with the format of the DEERS lists, missing or incomplete addresses, and Operation Desert Shield/Storm delayed the development of mailing lists.

The modified GHAA Consumer Satisfaction Survey instrument was adapted for a military population. Survey instruments were sent out from November 1990 through April 1991. As surveys were returned, the contents were edited and comments coded. Items were scored as suggested by GHAA. Content categories were developed using the GHAA criteria. The ten GHAA content categories were access, finances, technical quality, communication, choice and continuity, interpersonal care, outcomes, overall quality, time spent, and general satisfaction. The survey instrument is contained in Appendix A and average responses in Table 1.

## Overview

Descriptive statistics were computed for respondents' demographics as to category of beneficiary, branch of service, gender, and rank. Psychometrics on the GHAA content categories for the rated items were examined using factor analyses and reliability estimates. Comparative analyses were conducted by category of beneficiary (Active Duty, Active Duty Dependent, Retired, Retired/Deceased Dependent), type of nearest DoD facility (MEDCEN, MEDDAC), type of health care program used (DoD MTF Only, CHAMPUS Plus, Private/Other), and use patterns. Comments written by respondents were analyzed for content.

## RESULTS

### DEMOGRAPHICS

As of 31 July 1991, responses had been received from 3,050 individuals, with an additional 860 surveys returned as undeliverable. The usable return rate was 36.6%.

#### Category of Beneficiary Users

The distribution of eligible beneficiary categories of the 9,200 sent out was Active Duty (35.1%), Active Duty Dependents (19.5%), Retired (25.2%), and Retired/Deceased Dependents (20.0%). Of the 3,050 respondents analyzed, the proportions for the "anticipated" beneficiary categories were Active Duty (24.5%), Active Duty Dependents (13.6%), Retired (35.9%), Retired/Deceased Dependents (26.0%), and unidentified (0.1%). The proportions as "self reported" by the respondents were Active Duty (26.1%), Active Duty Dependents (11.7%), Retired (38.9%), Retired/Deceased Dependents (23.3%). There was not a significant difference between the distributions ( $r=.949$ ). The "self reported" category of beneficiary was used for all analyses.

#### Branch of Service

The distribution of respondents and category of beneficiary by branch of service follows.

	<u>Category of Beneficiary of Population Sent Out</u>			
	<u>Act Duty</u>	<u>ActDuDep</u>	<u>Retired</u>	<u>Ret/Dec dep</u>
Branch of Service				
Army	2475	1349	1270	1017
Air Force	328	197	632	512
Navy/Marines	428	222	449	321

	Category of Beneficiary of Respondents				
	<u>Act</u> <u>Duty</u>	<u>Act</u> <u>Du</u> <u>Dep</u>	<u>Retired</u>	<u>Ret/Dec</u> <u>dep</u>	<u>Else</u>
Branch of Service					
Army	599	268	686	406	0
Air Force	101	44	300	221	0
Navy/Marines	94	44	198	85	0
Unidentified	2	0	2	0	0

	Category of Beneficiary of Undeliverable/Returns			
	<u>Act</u> <u>Duty</u>	<u>Act</u> <u>Du</u> <u>Dep</u>	<u>Retired</u>	<u>Ret/Dec</u> <u>dep</u>
Branch of Service				
Army	320	208	68	17
Air Force	26	17	40	14
Navy/Marines	75	38	30	7
Unidentified	0	0	0	0

#### Gender

The distribution of respondents, category of beneficiary, and gender by branch of service follows.

Branch of Service	Category of Beneficiary of Respondents								
	<u>Act Duty</u>		<u>ActDuDep</u>		<u>Retired</u>		<u>Ret/Dec dep</u>		<u>Else</u>
	Male	Fmle	Male	Fmle	Male	Fmle	Male	Fmle	
Army	471	128	14	254	616	70	7	399	0
Air Force	77	24	7	37	273	27	2	219	0
Navy/Marines	68	26	2	42	188	10	2	83	0
Unidentified	2	0	0	0	2	0	0	0	1

#### Rank

The distribution of respondents, category of beneficiary, and rank by branch of service follows.

	Category of Beneficiary of Respondents											
	<u>Act</u> <u>Duty</u>						<u>Act</u> <u>Du</u> <u>Dep</u>					
	E1-5	E6-9	WO	01-3	04-6	Gen	E1-5	E6-9	WO	01-3	04-6	Gen
Branch of Service												
Army	227	186	14	112	60	0	68	107	17	34	42	0
Air Force	47	33	0	14	7	0	12	16	0	4	12	0
Navy/Marines	31	33	3	16	11	0	8	17	0	7	12	0
Unidentified	1	0	0	0	1	0	0	0	0	0	0	0

	Category of Beneficiary of Respondents															
	<u>Retired</u>							<u>Retired/Deceased</u>							<u>Dep</u>	
	Else	E1-5	E6-9	WO	01-3	04-6	Gen	Else	E1-5	E6-9	WO	01-3	04-6	Gen		
Branch of Service																
Army	0	35	375	49	24	187	16	0	18	219	41	12	113	3		
Air Force	0	23	179	4	13	78	3	0	13	130	4	2	68	4		
Navy/Marines	0	9	97	9	12	68	3	0	1	39	6	5	32	2		
Unident	0	0	1	1	0	0	0	0	0	0	0	0	0	0		



## PSYCHOMETRICS

The GHAA survey instrument consists of 34 rated items using a 5-point Likert scale. For the present study, one additional scale point was added to the GHAA 5-point scale, that of "Have Not Used; it was scored as a missing value.

A series of analyses were conducted to determine the psychometric properties of the items. The details are contained in Appendix A. The analyses included a principal components factor analysis of the 34 rated items; the amount of variance accounted for was 70.8%. The GHAA content categories were subjected to reliability estimates using the Kuder Richardson procedure to calculate coefficient alphas. Reliability estimates were calculated for the item clusters extracted from the factor analysis. Inter-item Pearson product moment correlation coefficients were calculated between selected items. In general, the GHAA content area items had quite acceptable psychometric properties, with coefficient alphas ranging from .844 to .954.

## COMPARATIVE ANALYSES

### Scoring of Content Categories

GHAA recommended transformation of the data by adding all of the items in a content category, subtracting the lowest possible score, and dividing the result by the range of scores possible. This assumes all subjects use all services and answer all questions; the GHAA scoring system was not practical as not all respondents used all the services or answered all of the items. The scoring method chosen for each content category was to calculate a mean of all of the items responded to by the subject. Mean content category responses for each respondent were the dependent measures. Table 1 summarizes item responses within content categories.

### Overview

Analysis of variance (ANOVA) comparisons were made on the ten GHAA content categories; comparisons were made for Category of Beneficiary, Type of Nearest DoD Facility, Type of Health Care Program Used, and use patterns. Means of the content category responses for each respondent were the dependent measures. One-way ANOVA comparisons are summarized in Table 2, while four-way ANOVA findings for main effects and interactions are shown in Table 3. The findings follow.

### Category of Beneficiary Users

The proportions as "self reported" by the respondents were Active Duty (26.1%), Active Duty Dependents (11.7%), Retired (38.9%), Retired/Deceased Dependents (23.3%). Table 2 contains a summary of the means and one-way analysis of variance comparisons. There were significant differences between the categories of beneficiaries for each of the content categories. In general, the Retired were significantly more satisfied, while the Active Duty Dependents were least satisfied.

#### Type of Nearest DoD Facility

Comparisons were made between eligible beneficiaries in the zipcode areas of Army Medical Centers (MEDCENS) and Army Medical Activities (MEDDACs). Of the surveys analyzed, 37.6% were returned from MEDCENS, the remainder from MEDDACs. Table 2 contains a summary of the means and one-way analysis of variance comparisons. There were significant differences between eligible beneficiaries near MEDCENS versus those near MEDDACs; those near MEDCENS reported being significantly more satisfied.

#### Type of Health Care Program Used

Comparisons were made between the types of health care program used in response to Q35. Responses were collapsed as follows: DoD Medical Treatment Facility only (44.3%), CHAMPUS or some combination with CHAMPUS (36.1%), private health insurance (19.6%). Table 2 contains a summary of the means and one-way analysis of variance comparisons. There were significant differences between the types of health care program used; the users of the DoD Medical Treatment Facility were generally most satisfied, while the CHAMPUS users were significantly less satisfied.

#### Who Uses the DoD Health System?

In response to Q39, 96.4% asserted to have used the DoD Health System. The distribution of individuals who had used the DoD Health System broken down by category of beneficiary was Active Duty (97.9%), Active Duty Dependents (99.1%), Retired (94.9%), and Retired/Deceased Dependents (96.5%).

In response to Q41, 82.9% of respondents reported using the MTF in the last 12 months. The distribution of recent users by category of beneficiary was Active Duty (88.6%), Active Duty Dependents (93.9%), Retired (75.5%), and Retired/Deceased Dependents (81.7%).

In response to Q42, 14.4% stated overnight admission for medical care during the last 12 months (n=387). The distribution of inpatient admissions by category of beneficiary was Active Duty (17.2%), Active Duty Dependents (17.2%), Retired (13.1%), and Retired/Deceased Dependents (11.5%).

Response to Q44 showed that 80.4% made outpatient visits for medical care during the last 12 months (n=2156). The distribution of outpatient visits by category of beneficiary was Active Duty (84.3%), Active Duty Dependents (91.3%), Retired (74.1%), and Retired/Deceased Dependents (79.4%).

#### Level of Satisfaction: Ratings

The overall level of satisfaction reported was good (mid-point on a 5-point scale). Table 1 summarizes the findings. The most satisfaction was expressed with the areas dealing with interpersonal care, the technical quality, and access to care facilities. The specific issues with the highest satisfaction ratings were (Q3) "Convenience of the location of the office;" (Q25) "Friendliness and courtesy shown to you by doctors and medical staff;" (Q27) "Respect shown to you, attention to your privacy;" (Q13) "Services available for getting prescriptions filled;" and (Q17) "Skill, experience, and training of doctors."

The lowest satisfaction ratings were with choice of personal doctor and telephone access to information. The specific issues with the lowest ratings were (Q23) "Arrangements for choosing a personal doctor," (Q24) "Ease of seeing the doctor of your choice," (Q11) "Availability of medical information or advice by phone," and (Q10) "Length of time you wait between making an appointment for routine care and the day of your visit."

## COMMENTS

### Level of Satisfaction: Comments

The comments added by the respondents supported a moderate level of general satisfaction with the medical care received. The most positive comments dealt with specific MTFs. There were emphatic negative comments offered about several areas. Specific negative comments dealt with the appointment system, access to specialty care, a particular clinic or service, specific physicians, and the waiting time at the office to see the doctor. Table 4 summarizes the content of the comments offered in the major categories.

## DISCUSSION

### Areas Needing Change

Among the areas rated needing attention were those dealing with the appointment system, waiting times, the choice of a particular provider, and phone access to care. The specific issues with the lowest satisfaction ratings were with the (Q23) "Arrangements for choosing a personal doctor," (Q24) "Ease of seeing the doctor of your choice," (Q11) "Availability of medical information or advice by phone," and (Q10) "Length of time you wait between making an appointment for routine care and the day of your visit." The comments added by the respondents were specifically negative about the appointment systems, particular clinics or programs, and the waiting times.

These were almost the identical issues that were reported as needing change in the 1989-1990 survey. Similarly, the areas of satisfaction reported in 1990-1991 paralleled those of 1989-1990.

### What Do These Findings Mean?

The majority of the respondents are using outpatient services at DoD MTFs. Individuals who have used the DoD Health System are generally satisfied with the care provided by the doctors and staff, particularly the interpersonal dynamics (the friendliness, courtesy, respect, reassurance, and support given to the patients). Once the patient got into the system, the MTF staff was perceived as providing good health care. This has been consistent between the 1989-1990 and 1990-1991 surveys. The problem was obtaining access to the system or telephone information about specific problems. The retired patients were most satisfied with the care provided, while the Active duty dependents were least. The retired patients were most likely to add comments about their experiences.

### Comparisons With Previous Studies

Literature searches of the Medline and the Defense Technical Information Center data bases revealed a number of citations on patient satisfaction. Patient expectations and satisfaction have been examined in numerous studies (Brooks, 1973; Davies and Ware, 1988; Fisher, 1971; Lebow, 1974, 1975, 1983; Houston and Pasanen, 1972; Hulka, Zyzanski, Cassel, and Thompson, 1970; Mangelsdorff, 1979, 1980; Ware, 1976; Ware, Davies-Avery, and Stewart, 1978; Ware and Hays, 1988; Ware and Snyder, 1975; Ware, Wright, Snyder, and Chu, 1975; Zyzanski, Hulka, and Cassel, 1974). Within the DoD health care system, major studies have included the DoD Report of the Military Health Care Study (December, 1975), the DoD 1984 Health Care Survey (April, 1985), the General Accounting Office (GAO) surveys of military hospital patients views (September, 1989), and the RAND Corporation Health Care Reform Evaluation Study (ongoing).

The GAO study (1989) findings are most similar to the 1989-1990 and 1990-1991 studies. The GAO results showed overall satisfaction with the care received in the military treatment facilities surveyed (three were Army facilities). The active duty personnel and dependents were somewhat less satisfied with the care than were retirees and their dependents. Patients generally considered the MTF staff to be courteous and competent. Outpatient appointments often were difficult to make. Comments on outpatient care dealt with rude or impersonal staff, more staff needed, and staff perceived as incompetent. Comments on inpatient care included rude or impersonal staff, compliments to hospital or staff, and staff perceived as incompetent.

## CONCLUSIONS

There has been consistency between the findings of the 1989 1990 and 1990-1991 studies. Eligible beneficiaries reported moderate satisfaction with the health care received in military medical treatment facilities. The retired personnel reported the most satisfaction, while the active duty dependents were least satisfied. Individuals who have used the military health care system are generally satisfied with the doctors and staff, particularly the friendliness, courtesy, and support given. Specific problems included the appointment systems, access to services, telephone information or advice, waiting times, and difficulties with particular clinics or personnel. The majority of the respondents are using outpatient services.

## RECOMMENDATIONS

Periodic surveys need to be conducted to assess changes in the health care delivery system. Feedback of findings for publication in post newspapers would be helpful to praise medical treatment personnel for the good work being done, while offering suggestions for further improvement.

TABLE 1

DESCRIPTIVE STATISTICS: MEAN AND MEDIAN RESPONSES  
FOR ITEMS IN CONTENT CATEGORIES

CONTENT	MEAN	MEDIAN	n
<u>ACCESS TO CARE</u>			
3. Convenience of location of the doctor's office	3.60	4 (Very good)	2441
4. Hours when the doctor's office is open	3.42	3 (Good)	2422
5. Access to specialty care if you need it	2.90	3 (Good)	2216
6. Access to hospital care if you need it	3.37	3 (Good)	2223
7. Access to medical care in an emergency	3.47	4 (Very good)	2213
8. Arrangements for making appointments for medical care by phone	2.59	2 (Fair)	2401
9. Length of time spent waiting at the office to see the doctor	2.58	2 (Fair)	2481
10. Length of time you wait between making an appointment for routine care and the day of your visit	2.52	2 (Fair)	2396
11. Availability of medical information or advice by phone	2.39	2 (Fair)	1840
12. Access to medical care whenever you need it	3.01	3 (Good)	2463
13. Services available for getting prescriptions filled	3.52	4 (Very good)	2475
<u>FINANCES</u>			
14. Protection you have against financial hardship due to medical expenses	3.18	3 (Good)	1850
15. Arrangements for you to get the medical care you need without financial problems	3.27	3 (Good)	1864
<u>TECHNICAL QUALITY</u>			
16. Thoroughness of examinations and accuracy of diagnoses	3.30	3 (Good)	2469
17. Skill, experience, and training of doctors	3.50	4 (Very good)	2460
18. Thoroughness of treatment	3.38	3 (Good)	2475
<u>COMMUNICATION</u>			
19. Explanations of medical procedures and tests	3.37	3 (Good)	2446
20. Attention given to what you have to say	3.21	3 (Good)	2490
21. Advice you get about ways to avoid illness & stay healthy	3.29	3 (Good)	2351

TABLE 1 CONTINUED

CONTENT	MEAN	MEDIAN	n
<u>CHOICE AND CONTINUITY</u>			
22. Number of doctors you have to choose from	2.36	2 (Fair)	2174
23. Arrangements for choosing a personal doctor	2.07	2 (Fair)	1924
24. Ease of seeing the doctor of your choice	2.21	2 (Fair)	2012
<u>INTERPERSONAL CARE</u>			
25. Friendliness and courtesy shown to you by doctors and medical staff	3.59	4 (Very good)	2504
26. Personal interest in you and your medical problems	3.29	3 (Good)	2496
27. Respect shown to you, attention to your privacy	3.55	4 (Very good)	2494
28. Reassurance and support offered to you by doctors and medical staff	3.41	3 (Good)	2455
29. Friendliness and courtesy shown to you by administrative staff (e.g., receptionist)	3.28	3 (Good)	2485
30. Amount of time you have with doctors and medical staff during a visit	3.15	3 (Good)	2484
<u>OUTCOMES</u>			
31. The outcomes of your medical care (how much you are helped)	3.41	3 (Good)	2473
32. Overall quality of care and services	3.42	3 (Good)	2497
<u>GENERAL SATISFACTION</u>			
1. I am very satisfied with the medical care I receive.	2.40	2 (Agree)	2612
2. There are some things about the medical care I receive that could be better.	2.17	2 (Agree)	2542
33. The medical care I have been receiving is just about perfect.	2.88	3 (Not sure)	2575
34. I am dissatisfied with some things about the medical care I receive.	2.72	2 (Agree)	2550

TABLE 2

MEANS AND ONE-WAY ANOVA COMPARISONS (n=2874)  
FOR GHAA CONTENT CATEGORIES

CATEGORY OF BENEFICIARY CONTENT	1 <u>ActDut</u> (n=796)	2 <u>AD Dep</u> (n=356)	3 <u>Retrd</u> (n=1186)	4 <u>Rtd Dep</u> (n=712)	<u>Cmprsn (sign)</u>
1 ACCESS	2.9	2.7	3.2	3.1	3=4>1>2
2 FINANCES	3.3	2.9	3.3	3.1	1=3>4>2
3 TECHNICAL QUALITY	3.1	3.0	3.6	3.5	3=4>1=2
4 COMMUNICATION	3.1	2.8	3.5	3.3	3=4>1>2
5 CHOICE AND CONTINUITY	2.0	2.0	2.5	2.3	3=4>2=1
6 INTERPERSONAL CARE	3.1	2.8	3.7	3.4	3>4>1>2
7 OUTCOMES	3.1	3.0	3.7	3.4	3>4>1=2
8 OVERALL QUALITY	3.1	2.9	3.7	3.5	3>4>1=2
9 TIME SPENT	2.9	2.7	3.4	3.2	3>4>1=2
10 GENERAL SATISFACTION	2.7	2.5	3.1	3.0	3=4>1=2

TYPE OF NEAREST DoD FACILITY CONTENT	1 <u>MEDCEN</u> (n=1147)	2 <u>MEDDAC</u> (n=1903)	<u>Cmprsn</u>
1 ACCESS	3.1	3.0	1>2
2 FINANCES	3.3	3.1	1>2
3 TECHNICAL QUALITY	3.5	3.2	1>2
4 COMMUNICATION	3.4	3.2	1>2
5 CHOICE AND CONTINUITY	2.3	2.2	1>2
6 INTERPERSONAL CARE	3.5	3.2	1>2
7 OUTCOMES	3.5	3.3	1>2
8 OVERALL QUALITY	3.6	3.2	1>2
9 TIME SPENT	3.2	3.0	1>2
10 GENERAL SATISFACTION	3.0	2.8	1>2

HEALTH CARE PROGRAM USED MOST CONTENT	1 <u>MTF Only</u> (n=1164)	2 <u>CHMP plus</u> (n=949)	3 <u>Prv Oth</u> (n=514)	<u>Cmprsn</u>
1 ACCESS	3.1	2.9	3.0	1>3=2
2 FINANCES	3.3	3.0	3.3	1=3>2
3 TECHNICAL QUALITY	3.4	3.2	3.4	1=3>2
4 COMMUNICATION	3.3	3.2	3.2	1=3>2
5 CHOICE AND CONTINUITY	2.3	2.2	2.2	1=3>2
6 INTERPERSONAL CARE	3.4	3.2	3.4	1>2
7 OUTCOMES	3.4	3.2	3.4	1>2
8 OVERALL QUALITY	3.3	3.2	3.4	1=3>2
9 TIME SPENT	3.2	3.0	3.1	1>2
10 GENERAL SATISFACTION	3.0	2.7	2.9	1=3>2



TABLE 2 CONTINUED

## USED DoD FACILITY IN LAST 12 MONTHS

<u>CONTENT</u>	<u>YES</u> <u>(n=2224)</u>	<u>NO</u> <u>(n=459)</u>	<u>Cmprsn</u>
1 ACCESS	3.1	2.8	1>2
2 FINANCES	3.2	3.0	1>2
3 COMMUNICATION	3.4	3.1	1>2
4 FINANCES	3.3	3.0	1>2
5 INTERPERSONAL CARE	2.3	2.0	1>2
6 TECHNICAL QUALITY	3.4	3.1	1>2
7 OUTCOMES	3.4	3.2	1>2
8 OVERALL QUALITY	3.4	3.2	1>2
9 TIME SPENT	3.1	2.8	1>2
10 GENERAL SATISFACTION	2.9	2.8	1>2

TABLE 3  
FOUR-WAY ANOVA COMPARISONS ON  
GHAA CONTENT CATEGORIES  
(Significance Levels)

CONTENT	Main Effects				Interactions			Mult r n	
	CatBen	MTF	HltPrq	Used	2x	3x	4x		
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>					
1 ACCESS	0001	047	0001	004	yes	ns	ns	.055	2520
2 FINANCES	0001	ns	0001	025	ns	yes	ns	.029	1906
3 TECHNICAL QUALITY	0001	0001	0001	0001	yes	ns	ns	.088	2420
4 COMMUNICATION	0001	002	003	0001	yes	ns	ns	.063	2431
5 CHOICE AND CONTINUITY	0001	ns	002	0001	yes	ns	ns	.046	2178
6 INTERPERSONAL CARE	0001	003	001	0001	yes	yes	ns	.094	2450
7 OUTCOMES	0001	0001	0001	0001	yes	ns	ns	.080	2392
8 OVERALL QUALITY	0001	0001	0001	0001	yes	ns	yes	.091	2414
9 TIME SPENT	0001	ns	0001	0001	yes	ns	ns	.065	2400
10 GENERAL SATISFACTION	0001	001	0001	001	yes	ns	ns	.074	2570

TABLE 4

## PATIENT SATISFACTION COMMENTS

<u>CONTENT</u>	<u>Q#</u>	<u>AD</u>	<u>ADD</u>	<u>Ret</u>	<u>RtD</u>	<u>Totals</u>
01 Genrl Satisfaction	1,33	22	18	81	69	190
29 Pos Overall Qual Care	32	13	8	30	13	64
33 Pos Private Hlth Ins	36	1	0	21	11	33
35 Pos Spec Clin/Sv/Dpt		10	10	16	9	45
52 Needs Improvement	2	10	7	10	6	33
53 General Dissatisfaction	34	35	22	48	26	131
54 Neg Convnc Location Office	3	7	4	29	13	53
56 Neg Accs to Spec Care	5	15	14	47	33	109
57 Neg Accs to Hosp Care	6	2	1	25	21	49
59 Neg Arrngmt Appointments	8	23	25	62	59	169
60 Neg Waiting Time Office	9	23	14	14	13	64
61 Neg Waiting Time Bet App	10	11	4	11	6	32
64 Neg Aval Prescrptn	13	6	8	24	17	55
76 Neg Frndl & Crt Staff	25	10	8	12	5	35
78 Neg Helpfulness Care	31	16	9	7	5	37
79 Neg Overall Qual Care	32	12	5	10	12	39
85 Neg Spec Clin/Sv/Dpt		30	14	27	15	86
88 Neg Physicians		29	24	16	15	84
90 Comments about survey		11	5	10	5	31
99 Other		60	19	95	53	227

Note: AD (active duty), ADD (active duty dependent), Ret (retired),  
RtD (retired/deceased dependent)

## REFERENCES

- Brooks, C. H. (1973). Associations among distance, patient satisfaction and utilization of two types of inner-city clinics. Medical Care, 11, 373-81.
- Davies, A. R., & Ware, J. E., Jr. (1988). Involving consumers in quality of care assessment. Health Affairs, 7, 33-48.
- Fisher, A. W. (1971). Patients' evaluation of outpatient medical care. Journal of Medical Education, 46, 238-44.
- Lebow, J. L. (1974). Consumer assessments of the quality of medical care. Medical Care, 12, 328-37.
- Lebow, J. L. (1975). Evaluation of an outpatient pediatric practice through the use of consumer questionnaires. Medical Care, 13, 250-55.
- Lebow, J. L. (1983). Similarities and differences between mental health and health care evaluation studies assessing consumer satisfaction. Evaluation and Program Planning, 5, 237-46.
- Houston, C. S., & Pasanen, W. E. (1972). Patients perception of hospital care. Hospital, 46, 70-74.
- Hulka, B. S., Zyzanski, S. J., Cassel, J. C. & Thompson, S. J. (1970). Scale for the measurement of attitudes toward physicians and primary health care. Medical Care, 8, 429-36.
- Mangelsdorff, A. D. (1979). Patient satisfaction questionnaire. Medical Care, 17, 86-90.
- Mangelsdorff, A. D. (1980). Patients satisfaction with an Army family practice settings. Journal of Community Psychology, 8, 272-5.
- Mangelsdorff, A.D. (July, 1990). Patient Satisfaction Survey 1989-1990. Health Care Studies and Clinical Investigation Activity Consultation Reports 90-003A and 90-003B.
- Ware, J. E., Jr. (1978). Effects of acquiescent response set on patient satisfaction ratings. Medical Care, 16, 327-36.
- Ware, J. E., Jr., Davies-Avery, A., Stewart, A.L. (1978). The measurement and meaning of patient satisfaction. Health and Medical Care Services Review, 1, 1-15.
- Ware, J. E., Jr., & Hays, R. E. (1988). Methods for measuring patient satisfaction with specific medical encounters. Medical Care, 26, 393-402.
- Ware, J. E., Jr., & Snyder, M. K. (1975). Dimensions of patient attitudes regarding doctors and medical care services. Medical Care, 13, 669-82.
- Ware, J. E., Wright, W. R., Snyder, M. K., & Chu, G. E. (1975). Consumer perceptions of health care services: Implications for academic medicine. Journal of Medical Education, 50, 839-48.
- Zyzanski, S. J., Hulka, B. S., & Cassel, J. C. (1974). Scale for the measurement of "satisfaction" with medical care: Modifications in content format and scoring. Medical Care, 12, 611-20.
- Report of the Military Health Care Study (December, 1975). Department of Defense, Department of Health, Education, and Welfare. Office of Management and Budget. (Report number 041-014000037-7). Washington, DC: U.S. Government Printing Office.
- DoD 1984 Health Care Survey (April, 1985). Why beneficiaries use the military health care system. Office of the Assistant Secretary of Defense for Health Affairs. Vector Research Inc.
- United States General Accounting Office (September, 1989). Defense Health Care: Patients' views on care they received. Government Accounting Office, Human Resources Division. (Report number GAO/HRD-89-137). Washington, DC
- RAND Corporation Health Care Reform Evaluation Study (ongoing).

## APPENDIX A

### PATIENT SATISFACTION SURVEY INSTRUMENT

SURVEY APPROVAL AUTHORITY: U.S. Army Personnel Integration Command  
 SURVEY CONTROL NUMBER: ATNC-AO-91-24  
 RCS:MILPC-3

SATISFACTION WITH MEDICAL CARE

The United States Army Health Services Command is looking for ways to improve the military health care system. The purpose of this survey is to document how you feel about the medical care you receive at your current local military medical treatment facility. For each statement, circle one number or fill in a response. Please answer all questions. Your answers will be treated as confidential.

Please indicate the name, location, and service of the United States military medical treatment facility where you currently, or most recently received medical care. If you have never received medical care at a military medical treatment facility, please circle "none" and skip to question 49.

Name/location military facility: \_\_\_\_\_  
 Service: Army/Air Force/Navy/Marine/Public Health: \_\_\_\_\_  
 None

THINKING ABOUT YOUR MEDICAL CARE, PLEASE INDICATE HOW MUCH YOU AGREE OR DISAGREE WITH EACH STATEMENT. (Circle one number for each.)

	<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	<u>Not</u> <u>Sure</u>	<u>Disagree</u>	<u>Strongly</u> <u>Disagree</u>	
1. I am very satisfied with the medical care I receive.	1	2	3	4	5	(1)
2. There are some things about the medical care I receive that could be better.	1	2	3	4	5	(2)

THINKING ABOUT YOUR OWN MEDICAL CARE, HOW WOULD YOU RATE THE FOLLOWING? (If you have not received care recently, or have not used a particular service, circle #6: "Have Not Used.") (Circle one number for each.)

	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Very</u> <u>Good</u>	<u>Excel-</u> <u>lent</u>	<u>Have</u> <u>Not</u> <u>Used</u>	
ACCESS: Arranging For and Getting Care							
3. Convenience of location of the doctor's office	1	2	3	4	5	6	(3)
4. Hours when the doctor's office is open	1	2	3	4	5	6	(4)
5. Access to specialty care if you need it	1	2	3	4	5	6	(5)

	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Very Good</u>	<u>Excel- lent</u>	<u>Have Not Used</u>	
6. Access to hospital care if you need it	1	2	3	4	5	6	(6)
7. Access to medical care in an emergency	1	2	3	4	5	6	(7)
8. Arrangements for making appointments for medical care by phone	1	2	3	4	5	6	(8)
9. Length of time spent waiting at the office to see the doctor	1	2	3	4	5	6	(9)
10. Length of time you wait between making an appointment for routine care and the day of your visit	1	2	3	4	5	6	(10)
11. Availability of medical information or advice by phone	1	2	3	4	5	6	(11)
12. Access to medical care whenever you need it	1	2	3	4	5	6	(12)
13. Services available for getting prescriptions filled	1	2	3	4	5	6	(13)
FINANCES							
14. Protection you have against hardship due to medical expenses	1	2	3	4	5	6	(14)
15. Arrangements for you to get the medical care you need without financial problems	1	2	3	4	5	6	(15)
TECHNICAL QUALITY							
16. Thoroughness of examinations and accuracy of diagnoses	1	2	3	4	5	6	(16)
17. Skill, experience, and training of doctors	1	2	3	4	5	6	(17)
18. Thoroughness of treatment	1	2	3	4	5	6	(18)
COMMUNICATION							
19. Explanations of medical procedures and tests	1	2	3	4	5	6	(19)

	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Very Good</u>	<u>Excel- lent</u>	<u>Have Not Used</u>	
20. Attention given to what you have to say	1	2	3	4	5	6	(20)
21. Advice you get about ways to avoid illness & stay healthy	1	2	3	4	5	6	(21)
CHOICE AND CONTINUITY							
22. Number of doctors you have to choose from	1	2	3	4	5	6	(22)
23. Arrangements for choosing a personal doctor	1	2	3	4	5	6	(23)
24. Ease of seeing the doctor of your choice	1	2	3	4	5	6	(24)
INTERPERSONAL CARE							
25. Friendliness and courtesy shown to you by doctors and medical staff	1	2	3	4	5	6	(25)
26. Personal interest in you and your medical problems	1	2	3	4	5	6	(26)
27. Respect shown to you, attention to your privacy	1	2	3	4	5	6	(27)
28. Reassurance and support offered to you by doctors and medical staff	1	2	3	4	5	6	(28)
29. Friendliness and courtesy shown to you by administrative staff (e.g., receptionist)	1	2	3	4	5	6	(29)
30. Amount of time you have with doctors and medical staff during a visit	1	2	3	4	5	6	(30)
OUTCOMES							
31. The outcomes of your medical care (how much you are helped)	1	2	3	4	5	6	(31)
32. Overall quality of care and services	1	2	3	4	5	6	(32)



THINKING ABOUT YOUR MEDICAL CARE, PLEASE INDICATE HOW MUCH YOU AGREE OR DISAGREE WITH EACH STATEMENT. (Circle one number for each)

- |  | <u>Strongly</u><br><u>Agree</u> | <u>Agree</u> | <u>Not</u><br><u>Sure</u> | <u>Disagree</u> | <u>Strongly</u><br><u>Disagree</u> |      |
|--|---------------------------------|--------------|---------------------------|-----------------|------------------------------------|------|
| 33. The medical care I have been receiving is just about perfect.        | 1                               | 2            | 3                         | 4               | 5                                  | (33) |
| 34. I am dissatisfied with some things about the medical care I receive. | 1                               | 2            | 3                         | 4               | 5                                  | (34) |

FOR THE FOLLOWING STATEMENTS, PLEASE CIRCLE ONE NUMBER OR FILL IN A RESPONSE.

35. Which one of the following basic health benefits or insurance plans best describes the type you personally use most? (choose only one)
- |   |   |      |
|---|---|------|
| Department of Defense Medical Treatment Facility (MTF) only | 1 |      |
| CHAMPUS only  | 2 |      |
| Medicare only   | 3 |      |
| Private health insurance (Blue Cross, AARP, etc.) only      | 4 |      |
| Combination of MTF and CHAMPUS                              | 5 |      |
| Combination of MTF and CHAMPUS and private insurance        | 6 |      |
| Combination of MTF and Medicare                             | 7 |      |
| Other combination   | 8 | (35) |
36. Is your spouse covered by a private health insurance plan? CHAMPUS and Medicare are not considered private health insurance plans.
- |                                  |   |      |
|----------------------------------|---|------|
| Does not apply, I am not married | 1 |      |
| Yes                              | 2 |      |
| No                               | 3 | (36) |
37. What type of private health insurance plan does your spouse currently have through his/her own job?
- |   |   |      |
|---|---|------|
| Does not apply, I am not married                              | 1 |      |
| Does not apply, my spouse is not currently working            | 2 |      |
| No coverage through current job                               | 3 |      |
| Private health insurance that reimburses for/pays part or all | 4 |      |
| Prepaid plan, such as an HMO                                  | 5 |      |
| Other kind  | 6 | (37) |
38. Are your dependent children covered by a private health insurance plan?
- |  |   |      |
|--|---|------|
| Does not apply, I have no dependent children | 1 |      |
| Yes  | 2 |      |
| No   | 3 | (38) |

39. How long have you personally used the Department of Defense health care system (such as a military medical treatment facility)?

Does not apply, I have not used	1	
Less than 1 year	2	
1 - 2 years	3	
3 or more years	4	(39)

40. How long have you personally used the Department of Defense health care system such as the military medical treatment facility at this current location?

Does not apply, I have not used	1	
Less than 1 year	2	
1 - 2 years	3	
3 or more years	4	(40)

41. Have you personally used the Department of Defense health care system such as a military medical treatment facility in the last 12 months?

Yes	1	
No	2	(41)

42. During the last 12 months, how many admissions did you personally have for medical care (when you stayed OVERNIGHT in the local military medical treatment facility)?

Zero (no overnight stays)	1	
One	2	
Two to four	3	
Five to nine	4	
Ten or more	5	(42)

43. During the last 12 months, how many admissions did other members of your family have for medical care (when they stayed OVERNIGHT in the local military medical treatment facility)?

Does not apply, I have no other family members	1	
Zero (no overnight stays)	2	
One	3	
Two to four	4	
Five to nine	5	
Ten or more	6	(43)

44. During the last 12 months, how many outpatient visits did you personally make for medical care? (DO NOT include medical visits when you stayed OVERNIGHT in the local military medical treatment facility)

None	1	
1 visit	2	
2 - 4 visits	3	
5 - 9 visits	4	
10 or more visits	5	(44)

45. During the last 12 months, how many outpatient visits did other members of your family make for medical care? (DO NOT include medical visits when they stayed OVERNIGHT in the local military medical treatment facility)

Does not apply, I have no other family members	1	
None	2	
1 visit	3	
2 - 4 visits	4	
5 - 9 visits	5	
10 or more visits	6	(45)

46. For the military medical treatment facility at your current location, how long do you usually have to wait between the time you make an appointment for care and the day you actually see the provider?

Does not apply, I have not used	1	
2 days or less	2	
3 days to 1 week	3	
1 to 2 weeks	4	
3 to 4 weeks	5	
5 to 6 weeks	6	
7 to 8 weeks	7	
9 or more weeks	8	(46)

47. At the military medical treatment facility at your current location, how long do you usually have to wait to see your provider when you have an appointment for care?

Less than 10 minutes	1	
10 - 15 minutes	2	
16 - 30 minutes	3	
31 - 45 minutes	4	
46 - 60 minutes	5	
More than 60 minutes	6	(47)

48. When you go for medical care how often do you see the same doctor?

Always	1	
Most of the time	2	
Sometimes	3	
Rarely or never	4	(48)

#### PERSONAL INFORMATION

The personal information is requested for comparison with responses from individuals using other types of health care facilities. Answers will be treated as confidential. Only group summary responses will be reported.

49. What is your personal health status?

Excellent	1	
Very good	2	
Good	3	
Fair	4	
Poor	5	(49)

50. What is your age group as of your last birthday?

Less than 21 years	1	
21 - 30 years	2	
31 - 40 years	3	
41 - 50 years	4	
51 - 60 years	5	
More than 60 years	6	(50)

51. Are you male or female?

Male	1	
Female	2	(51)

52. What is your personal racial background?

White	1	
Black	2	
Asian or Pacific Islander	3	
American Indian, Aleut, Eskimo	4	(52)

53. Are you of Hispanic/Spanish origin or descent?

Yes	1	
No	2	(53)

54. What was the highest grade you completed in school? (Circle only one number for the category that includes the highest grade you completed.)

Less than 8th grade	1	
Some high school	2	
High school graduate or GED	3	
Some college	4	
College graduate	5	
Post-graduate work or degree	6	(54)

55. Specify your own pay grade or rank (if you are active duty or retired) or the pay grade of your sponsor (if you are a family member). (Circle one number.)

PV1/E1	1	WO1	10	2LT/01	14
PV2/E2	2	CW2	11	1LT/02	15
PFC/E3	3	CW3	12	CPT/03	16
CPL, SPC/E4	4	CW4	13	MAJ/04	17
SGT/E5	5			LTC/05	18
SSG/E6	6			COL/06	19
SFC/E7	7			COL+	20
MSG/1SG/E8	8				
CSM/E9	9				

(55, 56)

56. Approximately what was your family's total income last year before taxes?

Less than \$10,000	1
\$10,000 to \$19,999	2
\$20,000 to \$29,999	3
\$30,000 to \$39,999	4
\$40,000 to \$49,999	5
\$50,000 to \$59,999	6
\$60,000 to \$69,999	7
\$70,000 to \$79,999	8
\$80,000 or more	9

(57)

57. Which of the following best describes your current marital status?

Single, never married	1
Married	2
Separated	3
Divorced	4
Widowed	5

(58)

58. What is the zip code at your local address?

Zip Code: \_ \_ \_ \_ \_

(59-63)

59. Which category of beneficiary best describes you?

Service member on active duty	1
Family member of active duty service member	2
Retired service member	3
Family member of retired service member	4

(64)

60. Have you participated in Operation Desert Shield?

Yes	1
No	2

(65)

Additional comments:

(66-67)

(68-69)

(70-71)

(72-73)

(74-75)

Thank you for your cooperation!

CASE # \_ \_ \_ \_ \_  
(76-80)

## APPENDIX B

### PSYCHOMETRICS

The GHAA survey instrument consists of 34 rated items using a 5-point Likert scale. For the present study, one additional scale point was added to the GHAA 5-point scale, that of "Have Not Used." This scale point was treated as a missing value. With the modified instrument, GHAA recommends reverse scoring of two items (Q1 and Q33) so the content of the items would be worded in the same direction.

#### Factor Analysis

Responses from the 3050 respondents were submitted to a principal components factor analysis of the 34 rated items. Five factors with eigenvalues greater than 1.0 were obtained, accounting for 70.8% of the cumulative variance. A Varimax rotation with Kaiser normalization was performed on the factors. Items having an item-total of .45 and greater were extracted.

#### Reliability Estimates: Coefficient Alphas of GHAA Content Categories

The GHAA content categories were subjected to reliability estimates using the Kuder Richardson procedure to calculate coefficient alpha. Coefficient alphas for the separate GHAA scales consisting of more than one item are shown.

<u>Content Category Name</u>	<u>Number of</u>		<u>Coefficient</u>	<u>Number of</u>
	<u>Items</u>	<u>Items</u>		
Access	11	Q3-Q13	.913	1368
Finances	2	Q14-Q15	.937	1747
Technical Quality	3	Q16-Q18	.954	2412
Communication	3	Q19-Q21	.898	2297
Choice and Continuity	3	Q22-Q24	.928	1850
Interpersonal Care	6	Q25-Q30	.947	2368
Outcomes	2	Q31-Q32	.928	2460
#General Satisfaction	4	Q1-Q2, Q33-Q34	.844	2411

Note: # GHAA reverse scored

#### Reliability Estimates: Coefficient Alphas of Item Clusters From Factor Analysis

Reliability estimates were calculated for the item clusters extracted from the factor analysis. Coefficient alphas for the separate item clusters consisting of at least two items were:

<u>Item Cluster Name</u>	<u>Number of</u>		<u>Coefficient</u>	<u>Number of</u>
	<u>Items</u>	<u>Items</u>		
Interpersonal/Technical	16	Q1, Q16-Q21, Q25-Q33	.920	2046
Ease/Timeliness	7	Q8-Q11, Q22-Q24	.910	1461
Access	7	Q3-Q7, Q12-Q13	.879	1746
#General Satisfaction	4	Q1-Q2, Q33-Q34	.885	2411
Finances	2	Q14, Q15	.937	1747

Note: # GHAA reverse scored

Reliability Estimates: Inter-Item Correlations

Inter-item Pearson product moment correlation coefficients were calculated between selected items. The items selected were from the GHAA General Satisfaction content category. Correlation matrices for raw and for reverse-scored items follow.

Raw Score Items:				
	Q1	Q2	Q33	Q34
Q1				
Q2	-481		714	-558
Q33		-487		541
			-645	

GHAA Reverse-Scored Items:				
	#Q1	Q2	#Q33	Q34
#Q1				
Q2	481		714	558
#Q33		-487		541
			-645	

Note: # GHAA reverse scored

## DISTRIBUTION

Director, The Army Library, ATTN: ANR-AL-RS (Army Studies), Rm 1A518,  
The Pentagon, Washington, DC 20310 (1)  
Administrator, Defense Logistics Agency, DTIC, ATTN: DTIC-DDAB, Cameron  
Station, Alexandria, VA 22304-6145 (2)  
Defense Logistics Studies Information Exchange, ALMC, ATTN: Mrs.  
Alter, Ft. Lee, VA 23802-6043 (1)  
Army/Air Force Joint Medical Library, DASG-AAFJML, Offices of the Surgeons  
General, 5109 Leesburg Pike, Room 670, Falls Church, VA 22041-3258 (1)  
HQDA (DASG-HCD-D), Washington, DC 20310-2300 (1)  
Medical Library, Brooke Army Medical Center, Reid Hall, Bldg 1001, Ft. Sam  
Houston, TX 78234-6200 (1)  
Stimson Library, Academy of Health Sciences, Bldg 2840, Ft. Sam Houston, TX  
78234-6000 (1)

## SPECIAL DISTRIBUTION

Commander, U.S. Army Forces Command, Ft. McPherson, GA 30330-6000 (1)  
Commander, U.S. Army Forces Command, Office of the Surgeon, Ft. McPherson, GA  
30330-6000 (1)  
Commander, USA Health Services Command, Ft. Sam Houston, TX 78234-6000 (1)  
Commander, USA Health Services Command, ATTN: HSCL-N Ft. Sam Houston, TX  
78234-6000 (1)  
Commander, Joint Military Medical Command, Randolph AFB, Universal City, TX  
78150-5000 (1)  
Commander, U.S. Army Medical Research & Development Command, Ft. Detrick MD  
21701-3624 (1)  
Commander, HQ U.S. Army Recruiting Command, Ft. Sheridan, IL 60037-6140 (1)  
Commander, HQ U.S. Army Training and Doctrine Command, Ft. Monroe, VA  
23651-5000 (1)  
Commander, HQ U.S. Army Training and Doctrine Command, Office of the Surgeon  
(ATMD), Ft. Monroe, VA 23651-5000 (1)  
Commander, 18th Medical Command, APO New York 96301-0017 (1)  
Commander, USA 7th Medical Command, APO New York 09102-3304 (1)  
  
Commander, William Beaumont Army Medical Center, El Paso, TX 79920-5001 (1)  
Commander, Brooke Army Medical Center, Ft. Sam Houston, TX 78234-6200 (1)  
Commander, Dwight David Eisenhower Army Medical Center, Ft. Gordon, GA  
30905-5650 (1)  
Commander, Fitzsimons Army Medical Center, Aurora, CO 80045-5001 (1)  
Commander, Letterman Army Medical Center, Presidio of San Francisco, CA  
94129-6700 (1)  
Commander, Madigan Army Medical Center, Tacoma, WA 98431-5000 (1)  
Commander, Tripler Army Medical Center, TAMC, HI 96859-5000 (1)  
Commander, Walter Reed Army Medical Center, Washington, DC 20307-5000 (1)  
  
Commander, U.S. Army Medical Department Activity, Ft. Belvoir, VA. 22060-5000 (1)  
Commander, U.S. Army Medical Department Activity, Ft. Benjamin Harrison, IN  
46216-7000 (1)  
Commander, U.S. Army Medical Department Activity, Ft. Benning, GA 39105-6100 (1)  
Commander, U.S. Army Medical Department Activity, Ft. Bragg, NC 28307-5000 (1)  
Commander, U.S. Army Medical Department Activity, Ft. Campbell, KY 42223-1498 (1)  
Commander, U.S. Army Medical Department Activity, Ft. Carson, CO 80913-5000 (1)  
Commander, U.S. Army Medical Department Activity, Ft. Devens, MA 01433-5000 (1)



Commander, U.S. Army Medical Department Activity, Ft. Dix, NJ 08640-6650 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Drum, NY 13602-5004 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Eutis, VA 23604-5564 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Hood, TX 76544-5063 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Huachuca, AZ  
 85613-7040 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Irwin, CA 92310-5065 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Jackson, SC 29207-5720 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Knox, KY 40121-5520 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Leavenworth, KS  
 66027-5400 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Lee, VA 23801-5260 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Leonard Wood, MO  
 65473-5700 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. McClellan, AL 36205-5000  
 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. George G. Meade, MD  
 20755-5800 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Monmouth, NJ  
 07703-5504 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Ord, CA 93941-5000 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Polk, LA 71459-6000 (1)  
 Commander, U.S. Army Medical Department Activity, Redstone Arsenal, AL  
 35809-7000 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Riley, KS 66442-5038 (1)  
 Commander, U.S. Aeromedical Center, Ft. Rucker, AL 36362-5333 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Sill, OK 73503-6300 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Stewart, GA  
 31314-5300 (1)  
 Commander, U.S. Army Medical Department Activity, Ft. Wainwright, AK  
 99703-7300 (1)  
 Commander, USA MEDDAC, West Point, NY 10996-1197 (1)

Deputy Under Secty (Operations Research), Department of the Army ATTN:  
 Mr. Walter Hollis, The Pentagon, Rm 2E660, Washington, DC 20310 (1)  
 Army Study Program Management Office, ATTN: OASC-DMO Mrs. Joann Langston, The  
 Pentagon Rm 3C567, Washington DC 20310 (1)  
 HQDA (DAS6-CN), Room 623, Skyline Five, 5111 Leesburg Pike, Falls Church, VA  
 22041-3258 (1)

Commander, U.S. Army Center of Military History, Pulaski Bldg, Massachusetts  
 Ave., NW, Washington, DC 20314-0200 (1)  
 Defense Advisory Committee on Women in the Services, ATTN: Maj Prewitt, Room  
 3C769, The Pentagon, Washington, DC 20310 (1)  
 Commander, U.S. Army Institute of Surgical Research, Brooke Army Medical Center  
 Ft. Sam Houston, TX 78234-6200 (1)

Commandant, USA Academy of Health Sciences, Ft. Sam Houston, TX 78234 (1)  
 Commandant, U.S. Army War College, Carlisle Barracks, PA 17013 (1)  
 Commandant, U.S. Army Institute of Personnel and Resources Management, Ft.  
 Benjamin Harrison, IN 46216 (1)  
 Commandant, U.S. Army Chaplain Center and School, Ft. Monmouth, NJ 07703 (1)  
 Commandant, U.S. Army Command and General Staff College, Ft. Leavenworth, KS  
 66027 (1)  
 Superintendent, US Military Academy, West Point, NY 10996 (1)